



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/993,442 12/18/97 JENNINGS

E 939A-040310

EXAMINER

TM01/1122

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ART UNIT

PAPER NUMBER

2121

DATE MAILED:

11/22/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/993,442

Applicant(s)

Jennings III et al.

Examiner

Ngo

Group Art Unit

2121

14

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☒ Responsive to communication(s) filed on 8-9-00 & 10-27-00

☒ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-9 08/993,442 is/are pending in the application.

Of the above claim(s) 9 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-8 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is: ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on 1-7 is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 13
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

DETAIL OF ACTION

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group I, claims 1-8, drawn to an array of processor for image frame rendering, classified in Class 708, subclass 524.

Group II, claim 9, drawn to a method of using an array processor for frame rendering, classified in Class 708, subclass 524.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions Group II and Group I, are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the process of Group II clearly does not require the specific structure of the apparatus recited in the claims of Groups 1. Indeed, the process can be implemented by any other apparatus which support fix point and floating point operations.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art, the search required for one Group is not required for the other Group, restriction for examination purposes as indicated is proper.

4. Since applicant has received an action on the merits for the invention of Group I, which is the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 9 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ngai et al. (4,888,682)..

As per claims 1 and 5-8, Ngai et al. discloses, for example in figures 2-5, an integrated circuit substantially as claimed, including an interface circuit (50-53), an embedded processor (54), an array of processors (30) including a plurality of multiply/accumulator (20) with local memory (12a), and a shared operand circuit (52) as claimed. It is noted that Ngai et al. does not specifically disclose the integrated circuit for image frame rendering. However, since Ngai et al. disclose the circuit for vector processing, it would have been an obvious field of use to apply the teaching of Ngai et al in image frame rendering as claimed.

As per claim 2, the use of simplified IEEE floating point notation in the computation would have been an obvious matter of design choices.

As per claims 3 and 5, the wire bundle (51-53) would obviously exceed 256 wires by the parallel connections.

7. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (5,187,796)

As per claims 1 and 5-8, Wang et al. discloses, for example in figures 2 and 3, an integrated circuit substantially as claimed, including an interface circuit (buses), an embedded processor (18), an array of processors including a plurality of multiply/accumulator (46,48,50) with local memory (40,42,44), and a shared operand circuit (82) as claimed. It is noted that Wang et al. does not specifically disclose the integrated circuit for image frame rendering. However, since Wang et al. disclose the circuit for vector processing, it would have been an obvious field of use to apply the teaching of Wang et al in image frame rendering as claimed.

As per claim 2, the use of simplified IEEE floating point notation in the computation would have been an obvious matter of design choices.

As per claims 3 and 5, the wire bundle (bus) would obviously exceed 256 wires by the parallel connections.

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong D. Ngo whose telephone number is (703) 305-9764.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800

The fax number for this Group is (703) 308-9051 or 9052.



Chuong D. Ngo
Primary Examiner
Art Unit 2121